

FIGURE 1

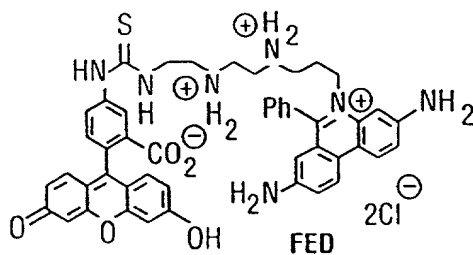
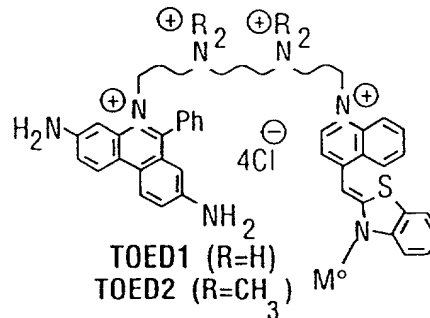
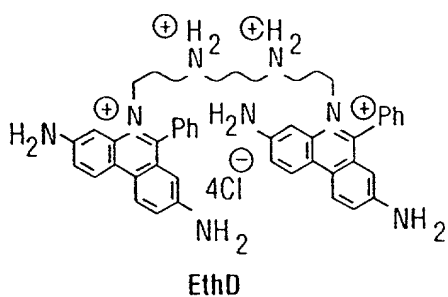
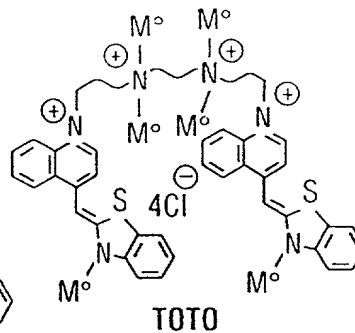
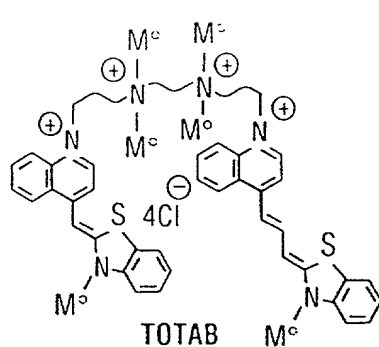
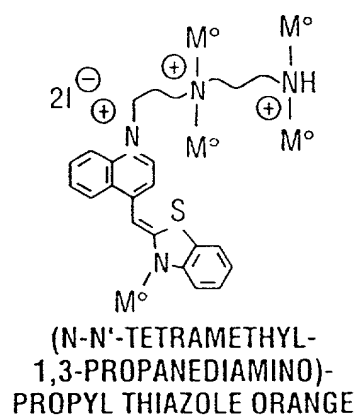
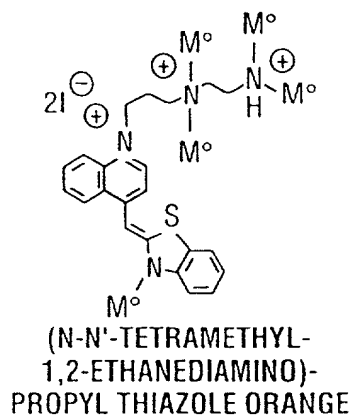
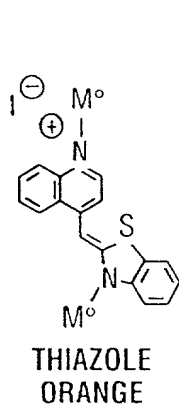
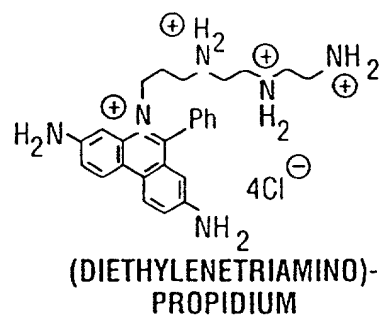
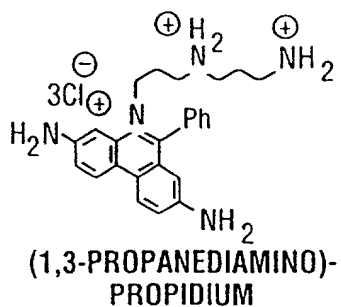
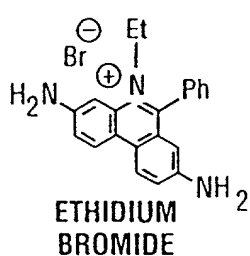


FIGURE 2

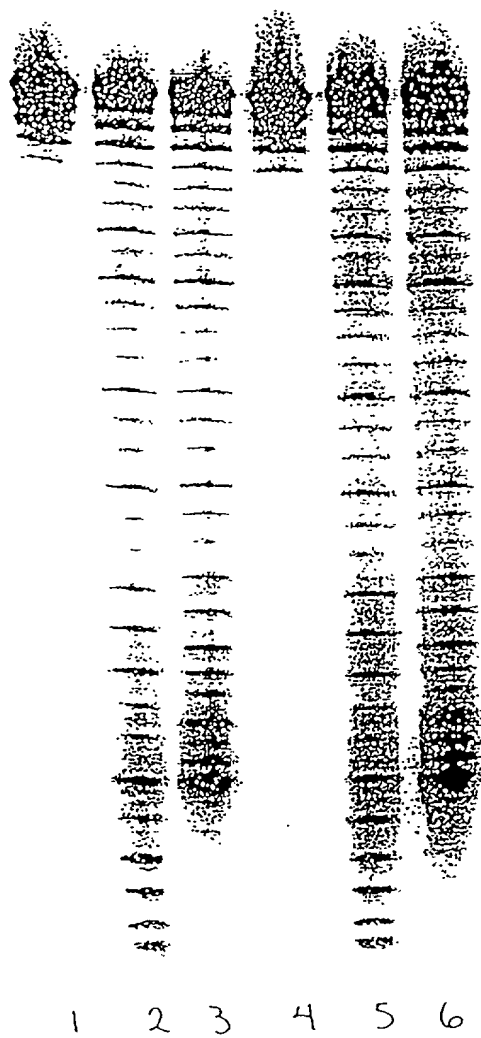


FIGURE 3

70 (C10 aminoT's)

74 (C6 amino T's)

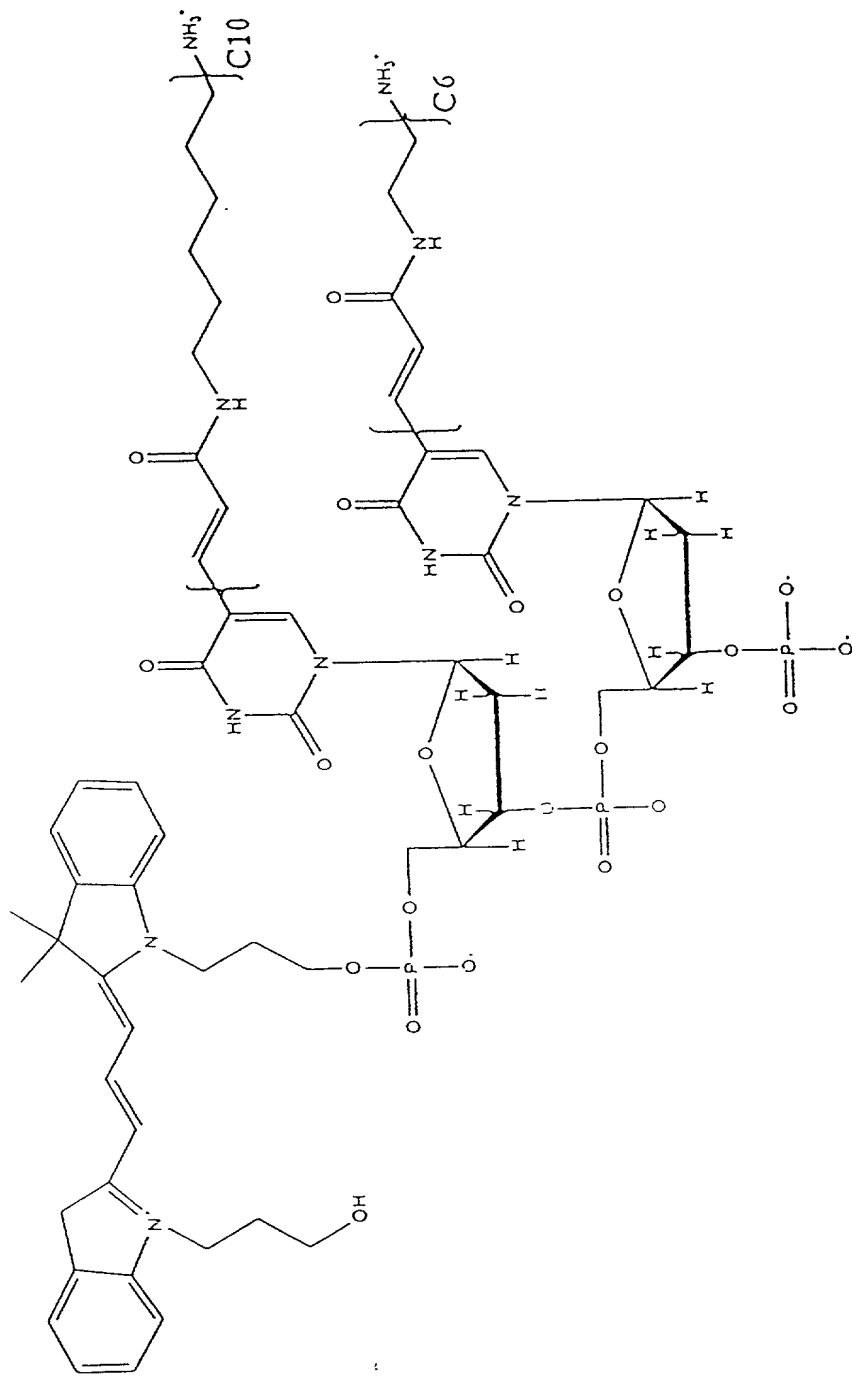
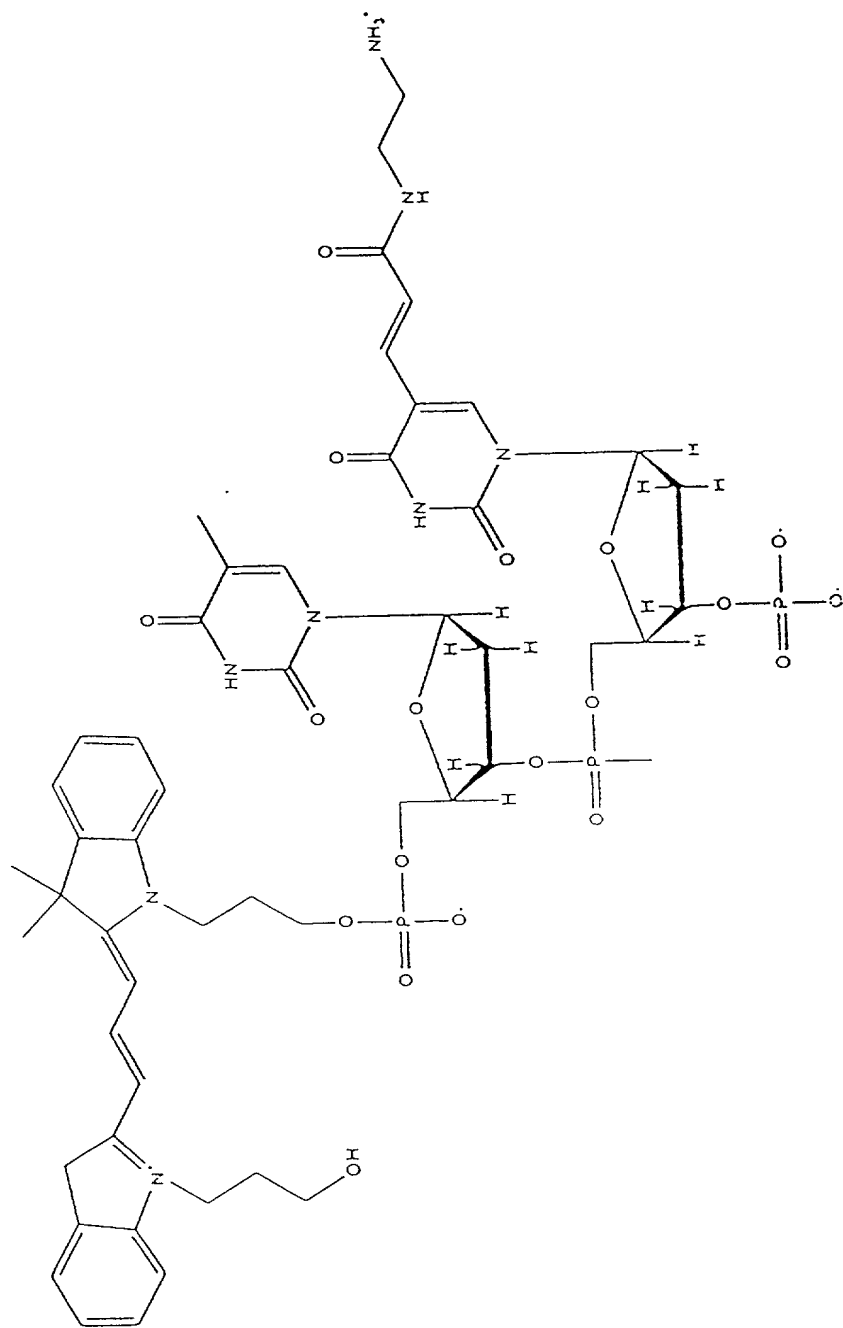


FIGURE 4a

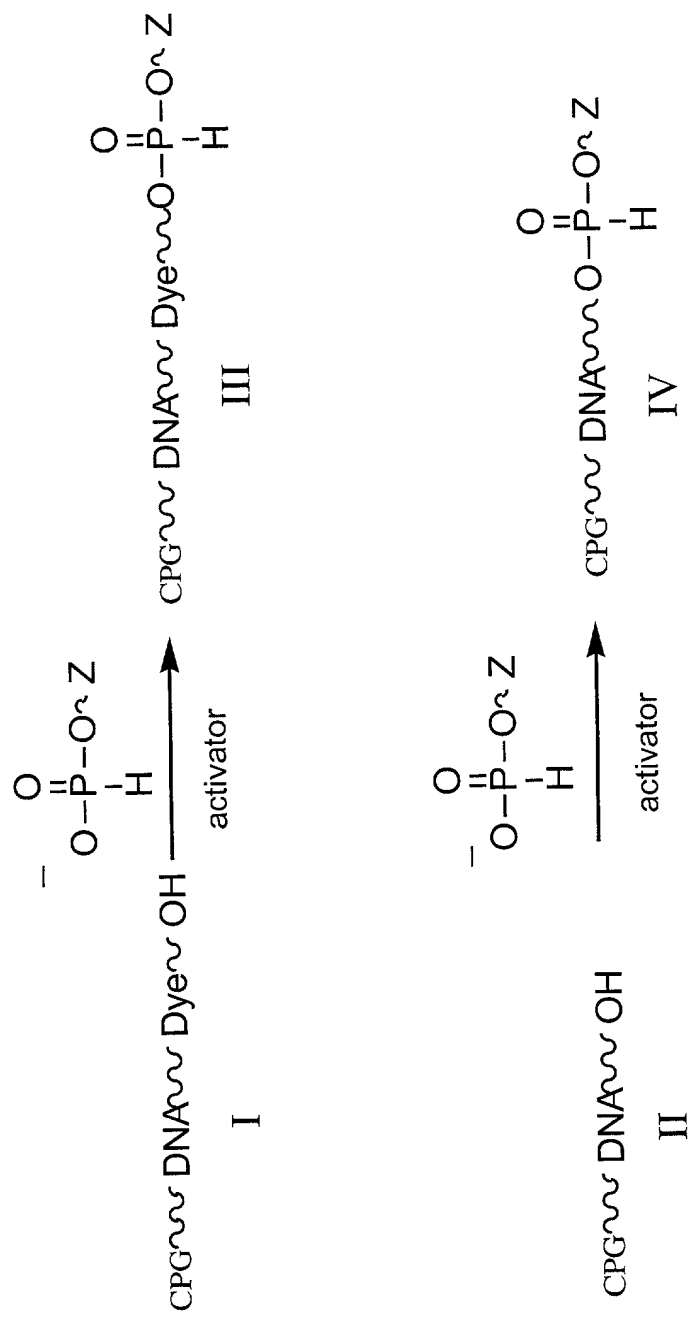
75



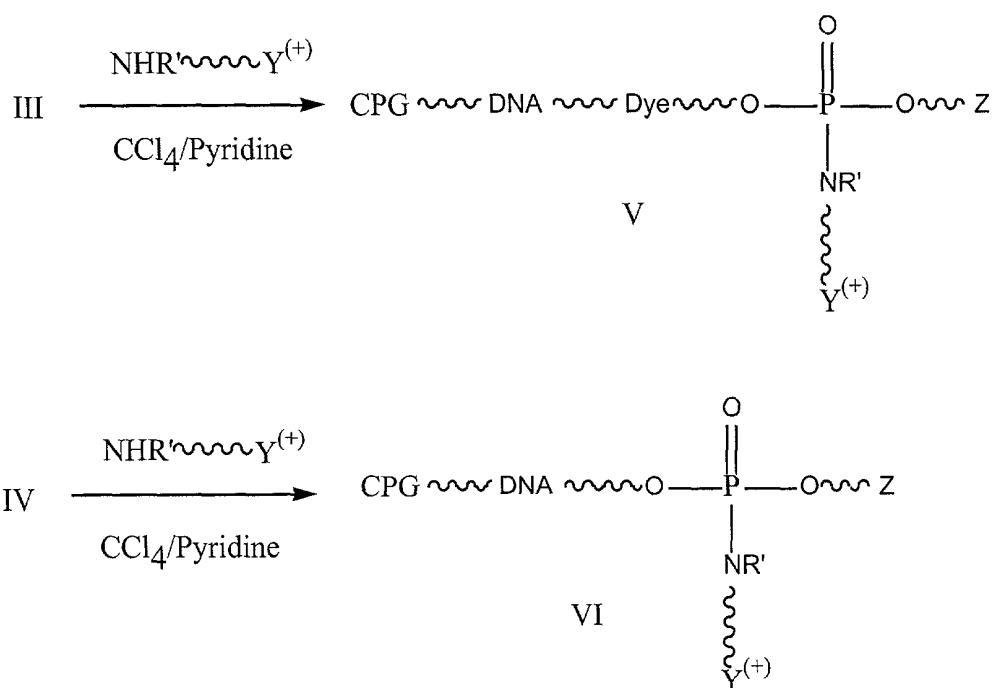
9h/h



FIGURE 5



# FIGURE 6



$\text{Y}^{(+)}$  = organic group capable to introduce positive charge

FIGURE 7

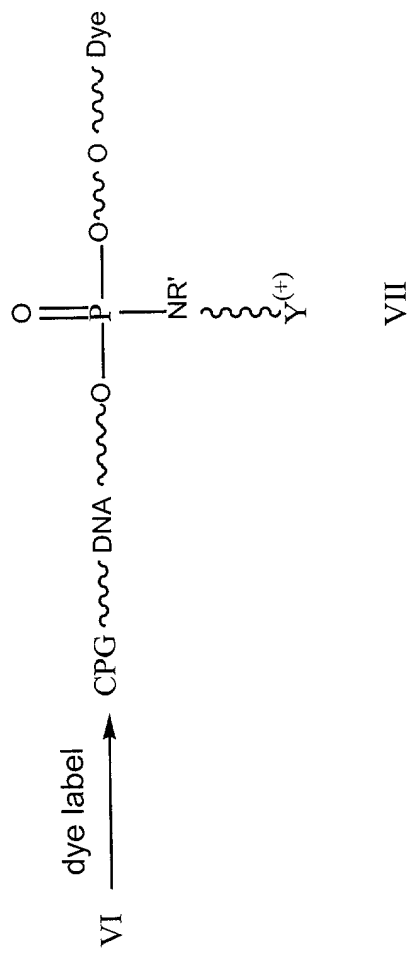
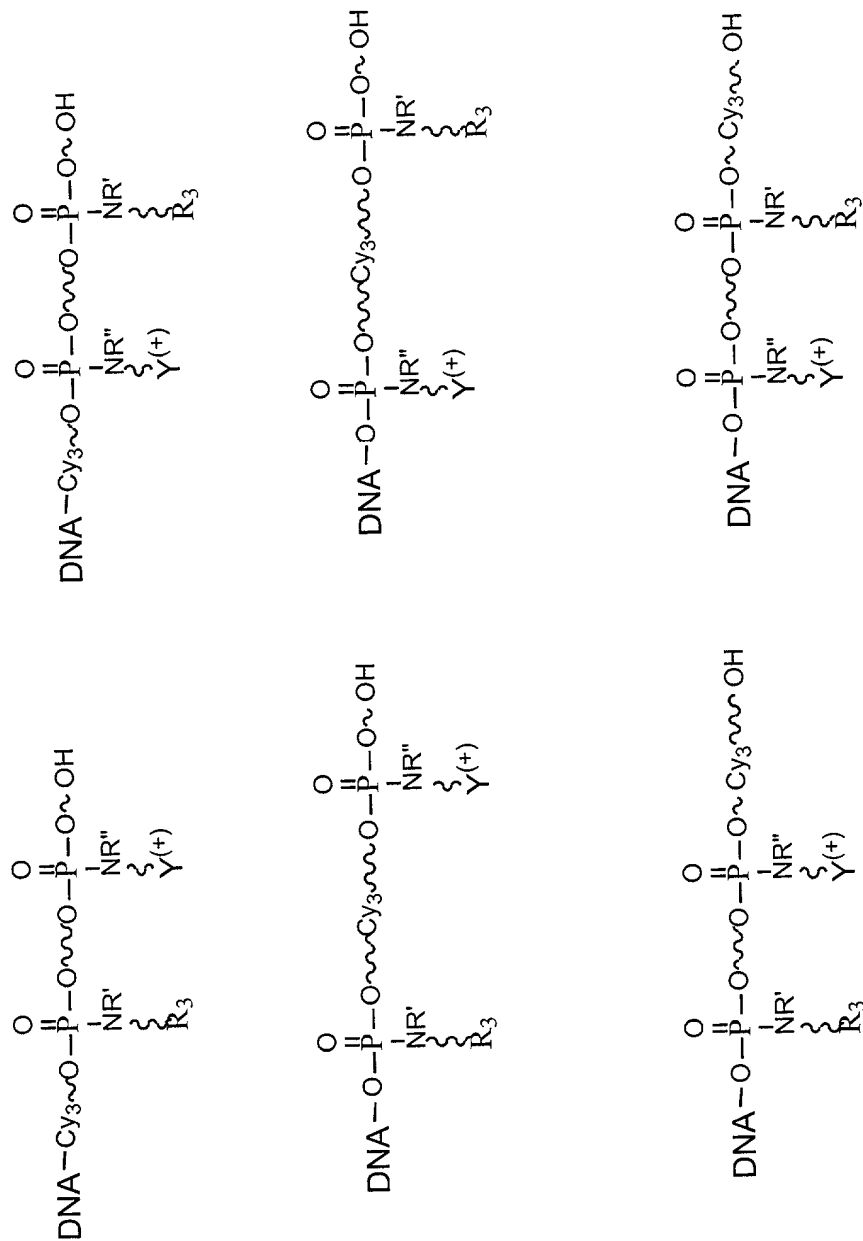


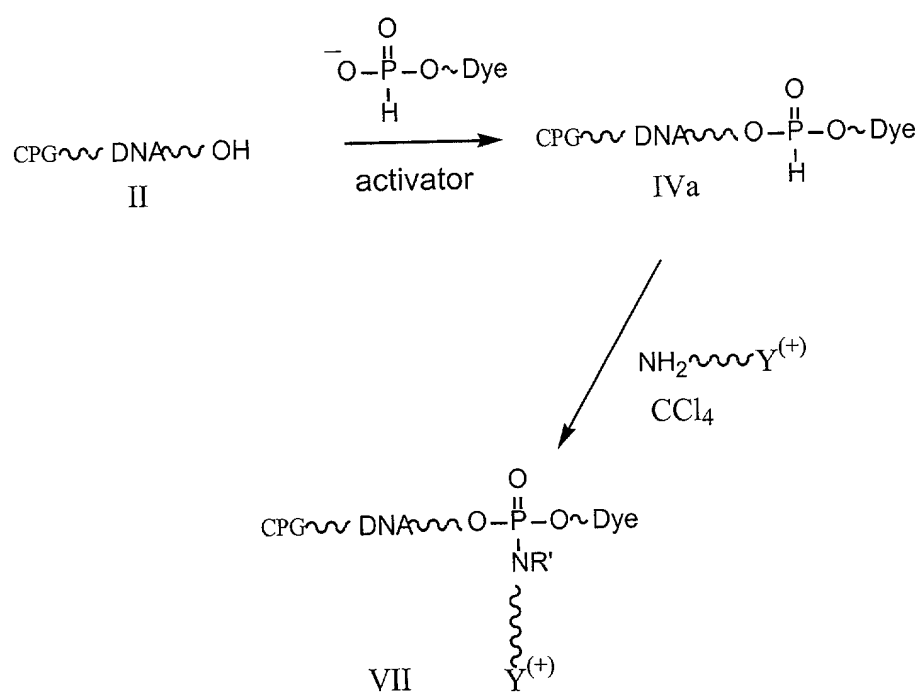


FIGURE 8

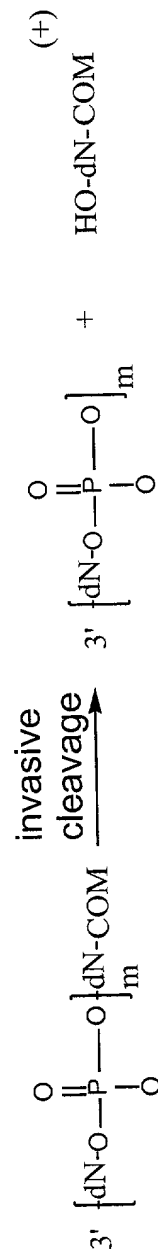


R', R'', R3 = H, alkyl, aryl

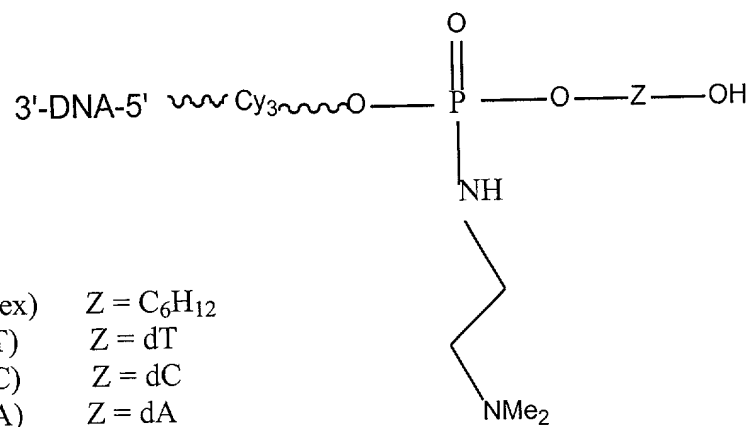
# FIGURE 9



## FIGURE 10

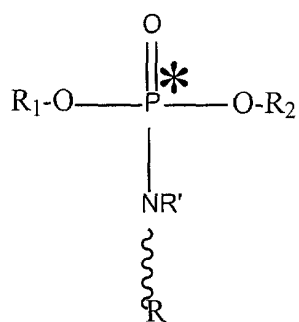


# FIGURE 11



V-(Hex)	Z = C <sub>6</sub> H <sub>12</sub>
V-(dT)	Z = dT
V-(dC)	Z = dC
V-(dA)	Z = dA
V-(dG)	Z = dG

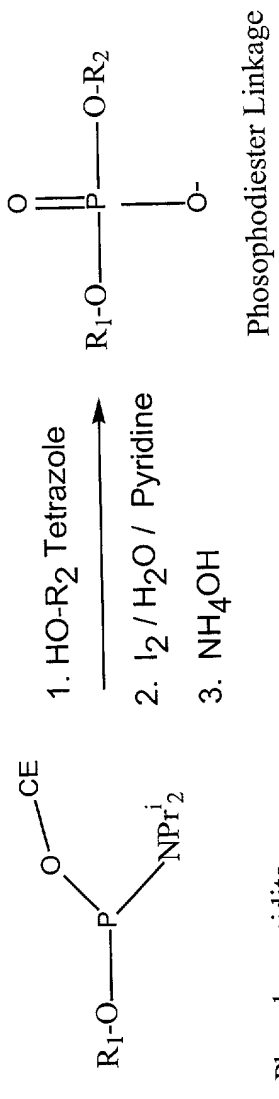
FIGURE 12



chiral phosphoramidate phosphorus atom

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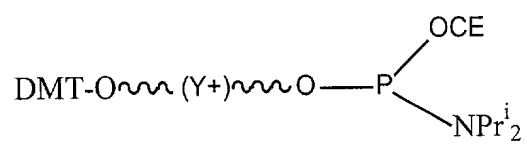
FIGURE 13



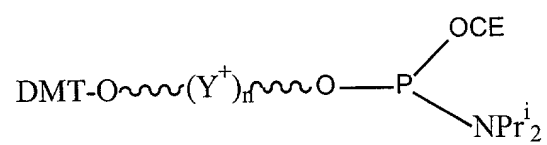
CE = Cyanoethyl

# FIGURE 14

A.



B.



# FIGURE 15

A.  $\begin{matrix} (0) & (+1) \\ 3'\text{-DNA} - (\text{DP}) - (\text{PCP}) \end{matrix}$

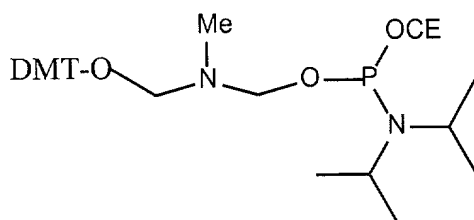
B.  $\begin{matrix} (0) & (0) & (+1) \\ 3'\text{-DNA} - (\text{DP}) - (\text{NP})_n - (\text{PCP}) \end{matrix}$

C.  $\begin{matrix} (0) & (-1) & (+1) \\ 3'\text{-DNA} - (\text{DP}) - (\text{PBB})_n - (\text{PCP})_{(n+1)} \end{matrix}$

D.  $\begin{matrix} (0) & (-1) & (+1) & (0) \\ 3'\text{-DNA} - (\text{DP}) - (\text{PBB})_n - (\text{PCP})_{(n+1)} - (\text{NP})_m \end{matrix}$

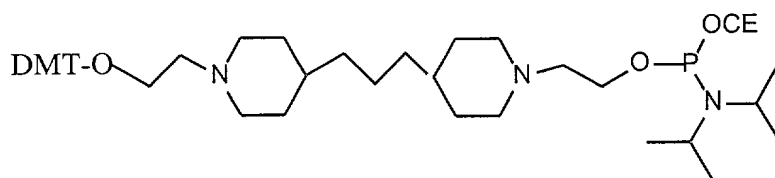


## FIGURE 16



Neutral Phosphoramidite

Net Charge : 0



Positively Charged Phosphoramidite

Net Charge : +1

# FIGURE 17

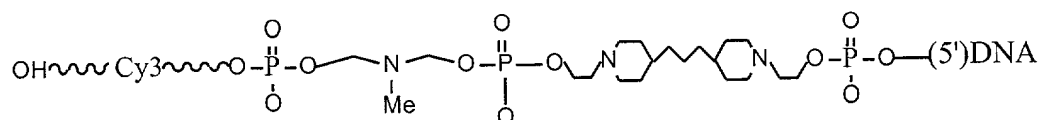
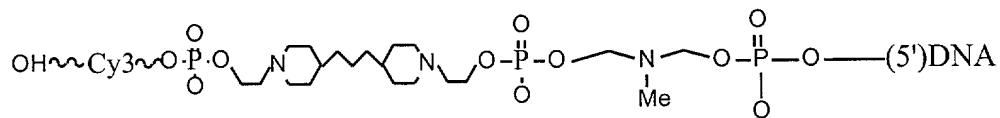
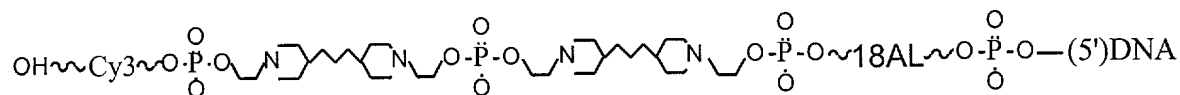
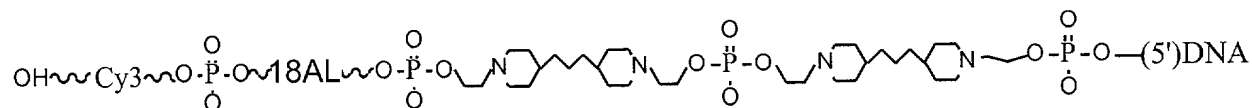
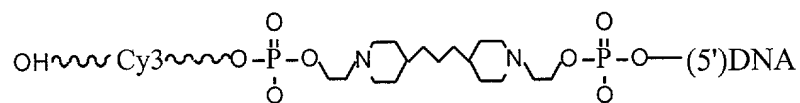
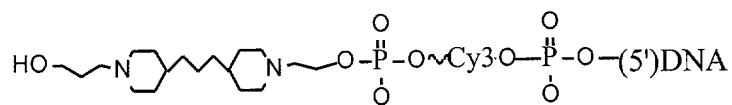


FIGURE 18

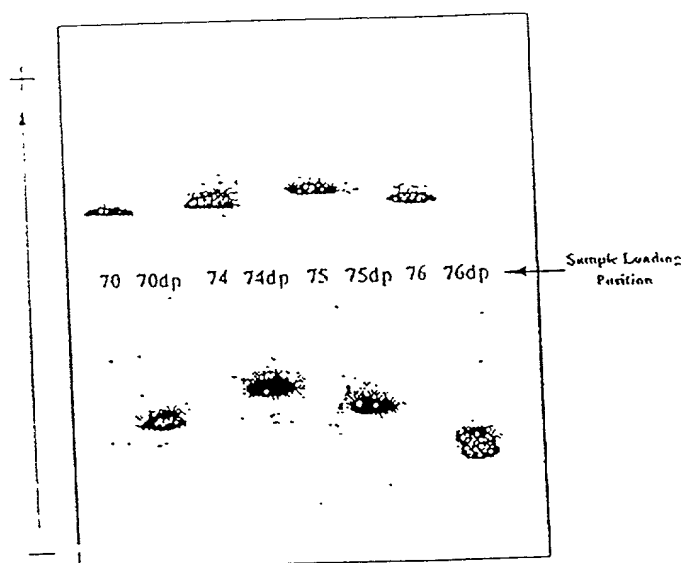
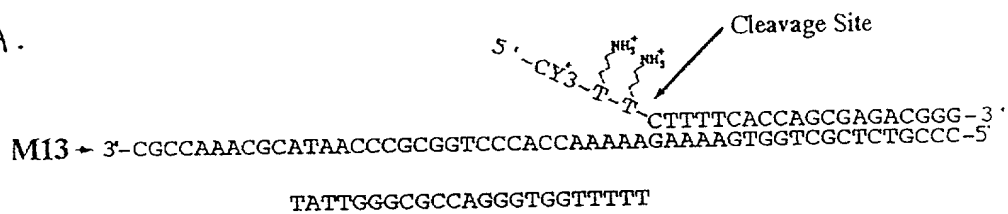


FIGURE 19

A.



B.

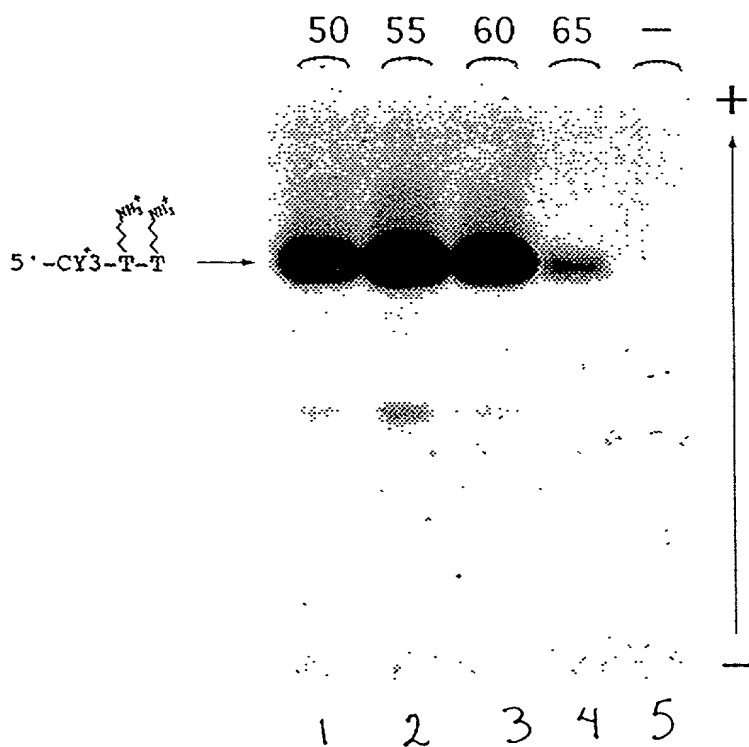


FIGURE 20

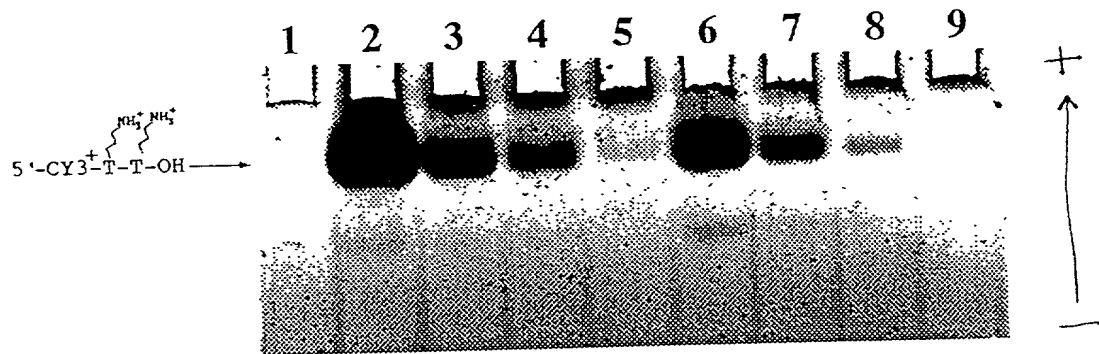


FIGURE 21

A

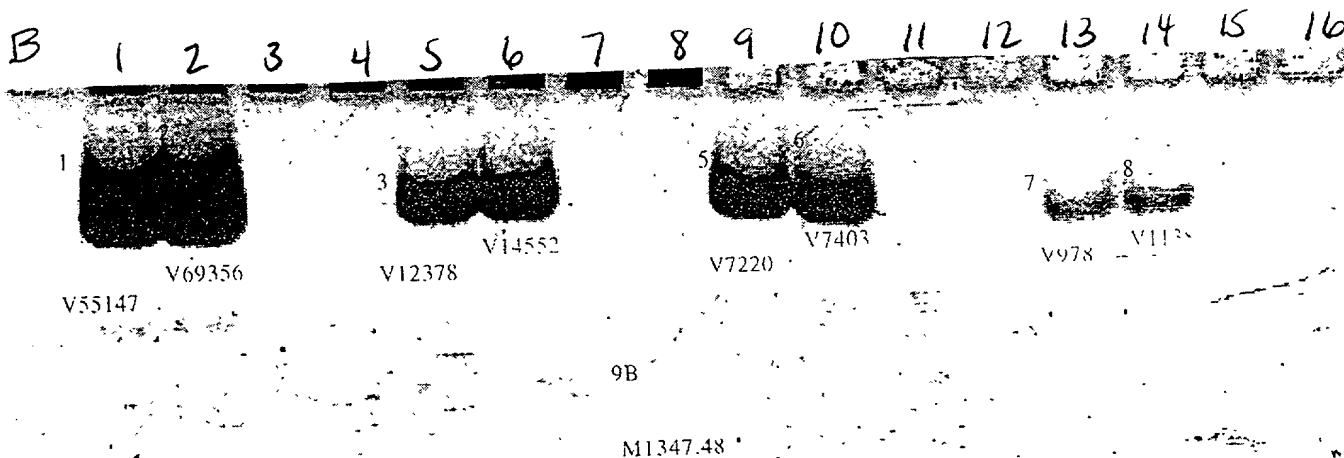
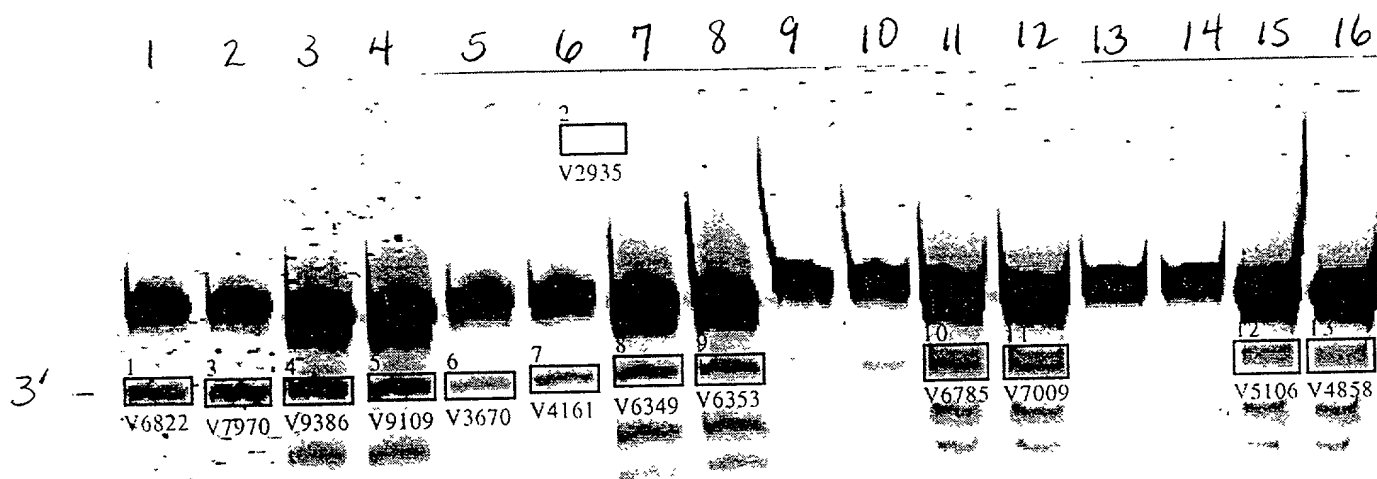
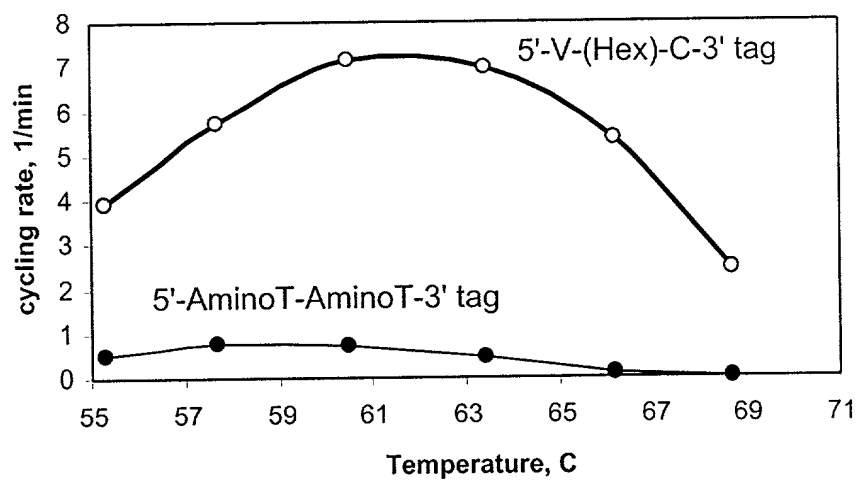
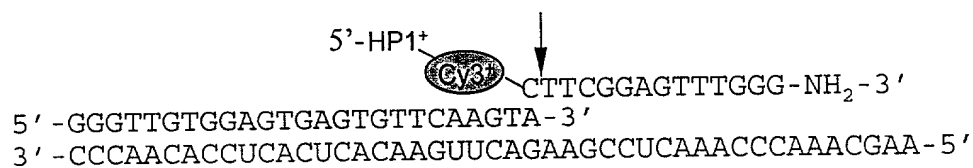


FIGURE 22



# FIGURE 23

A.



B.

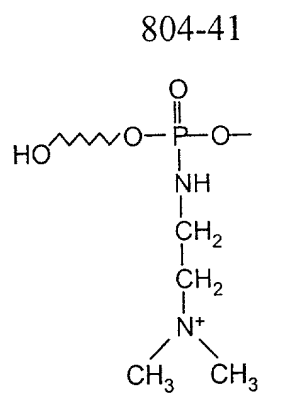
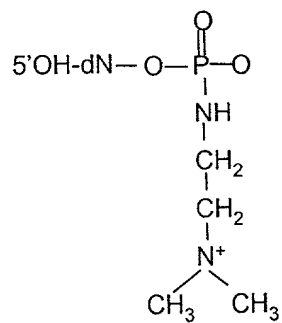




FIGURE 24A

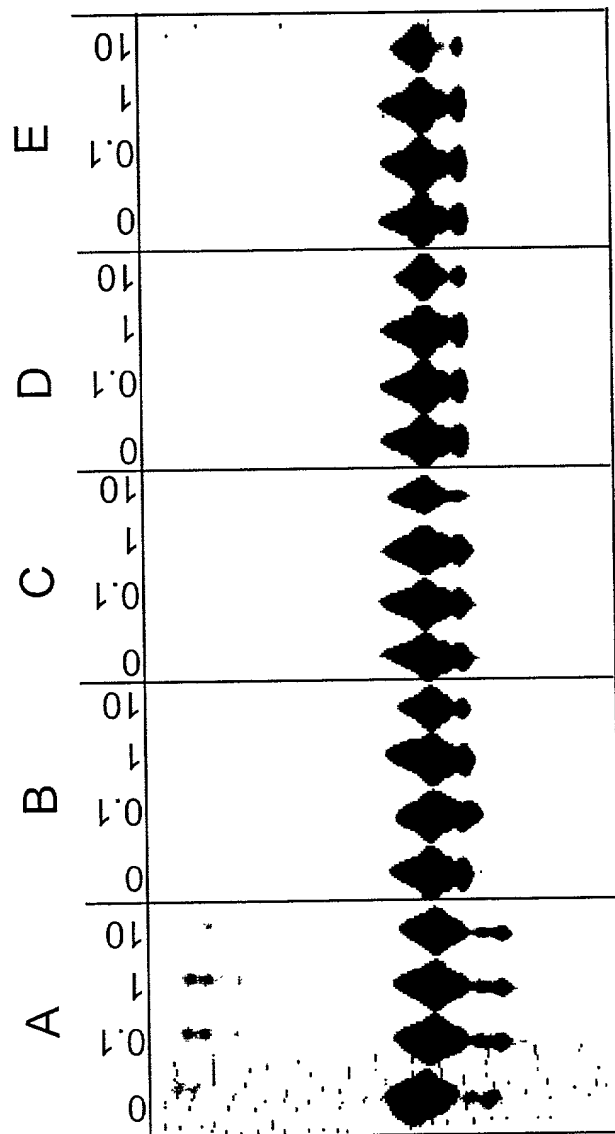


FIGURE 24B

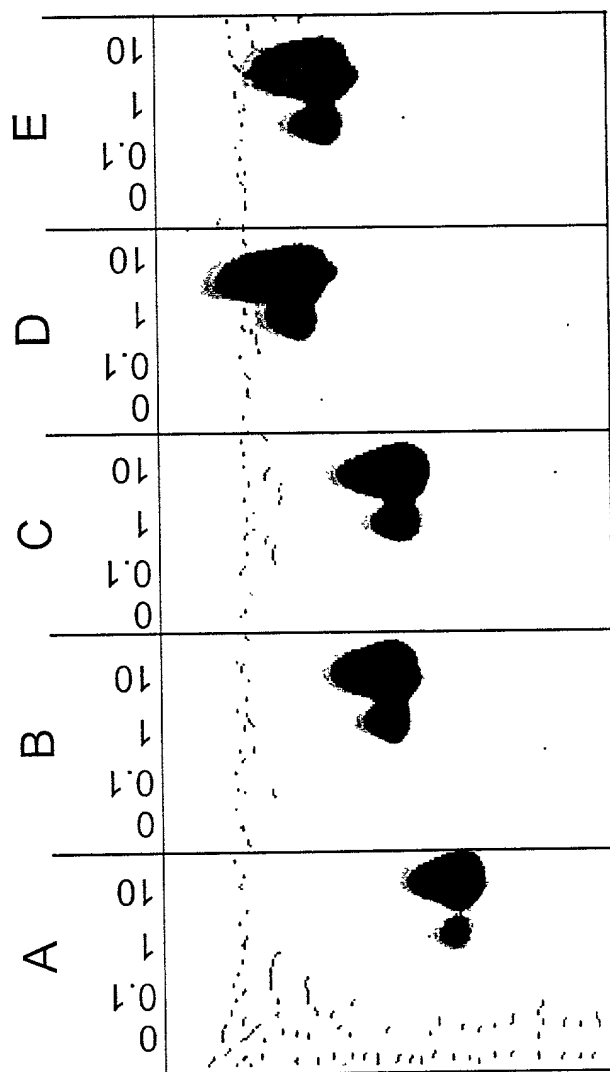


FIGURE 25

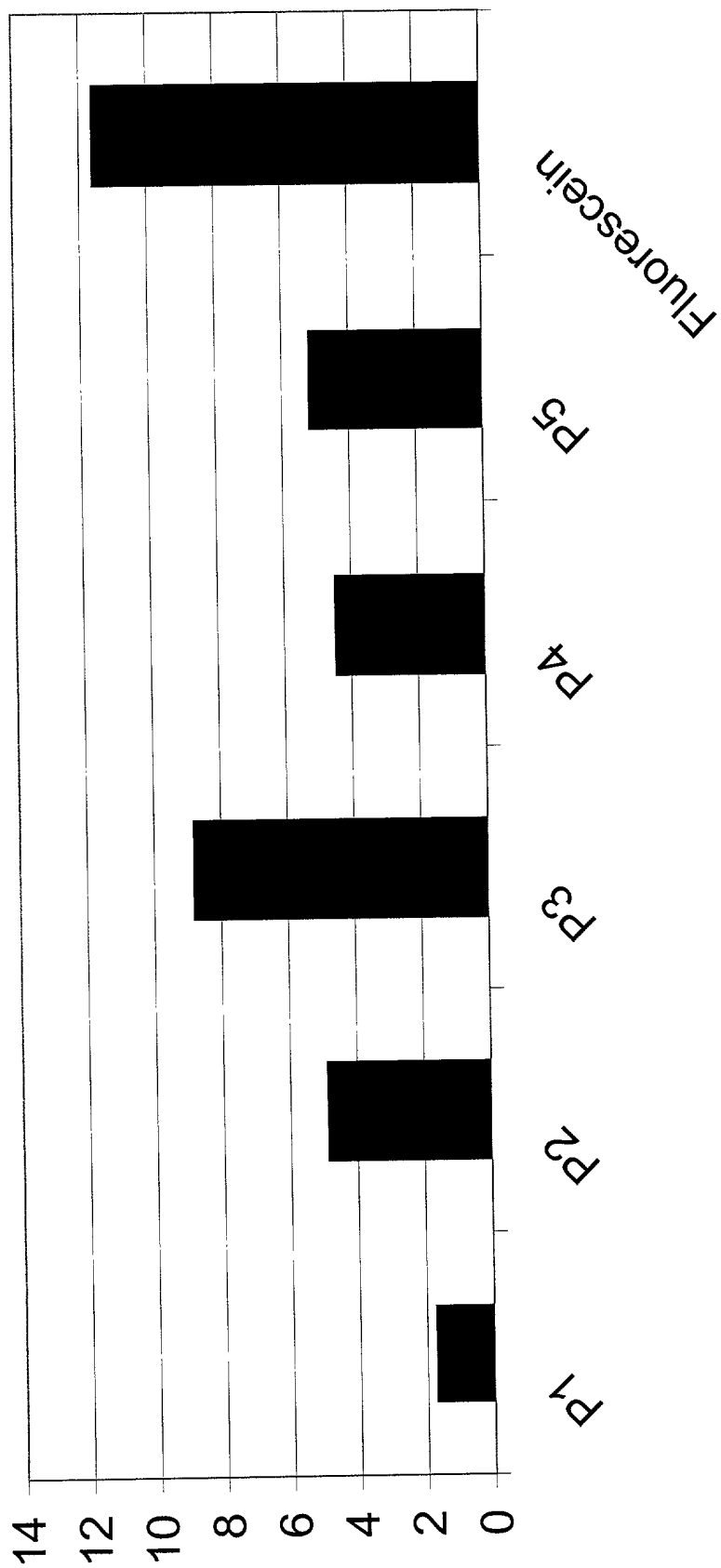


FIGURE 26A

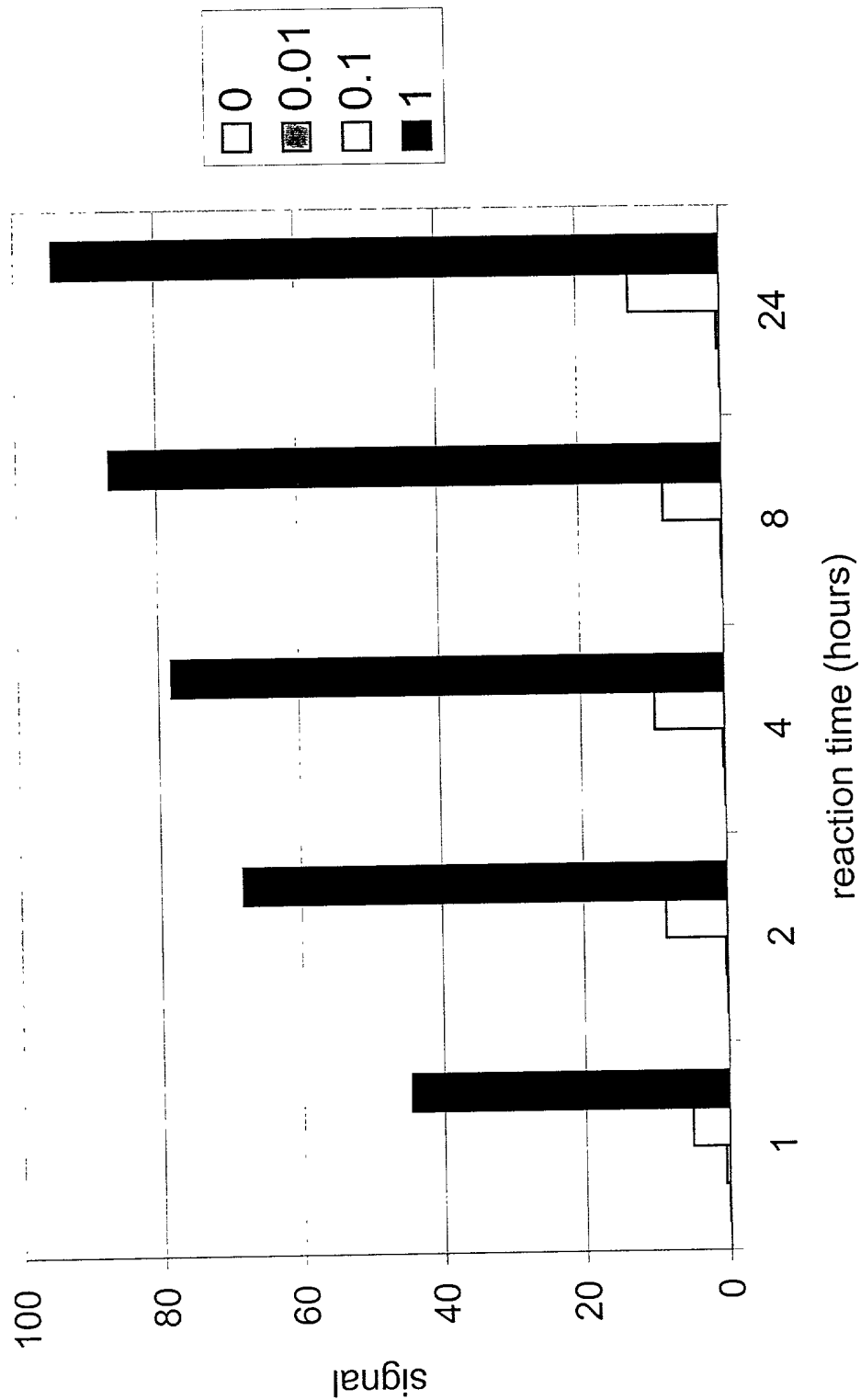


FIGURE 26B

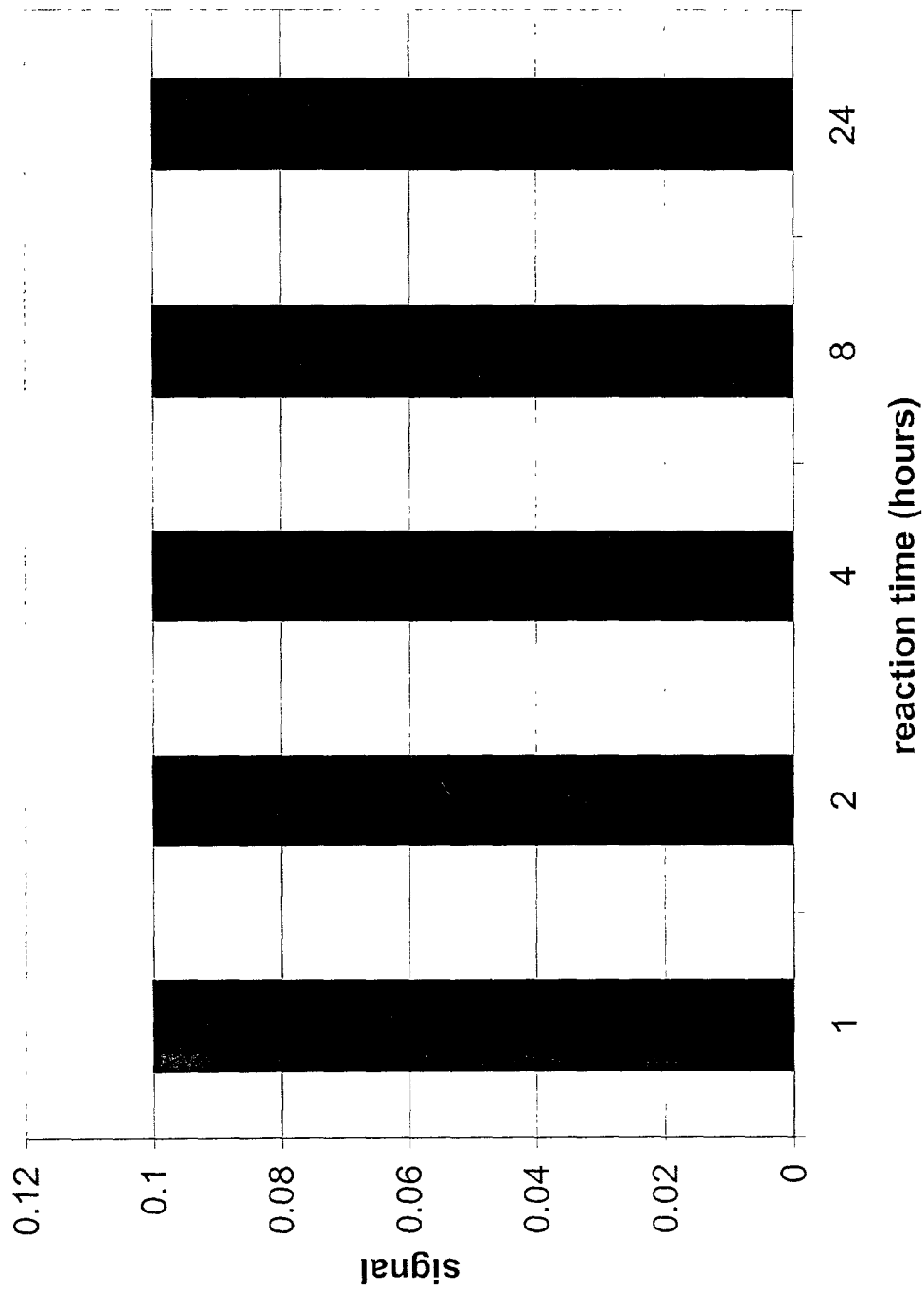
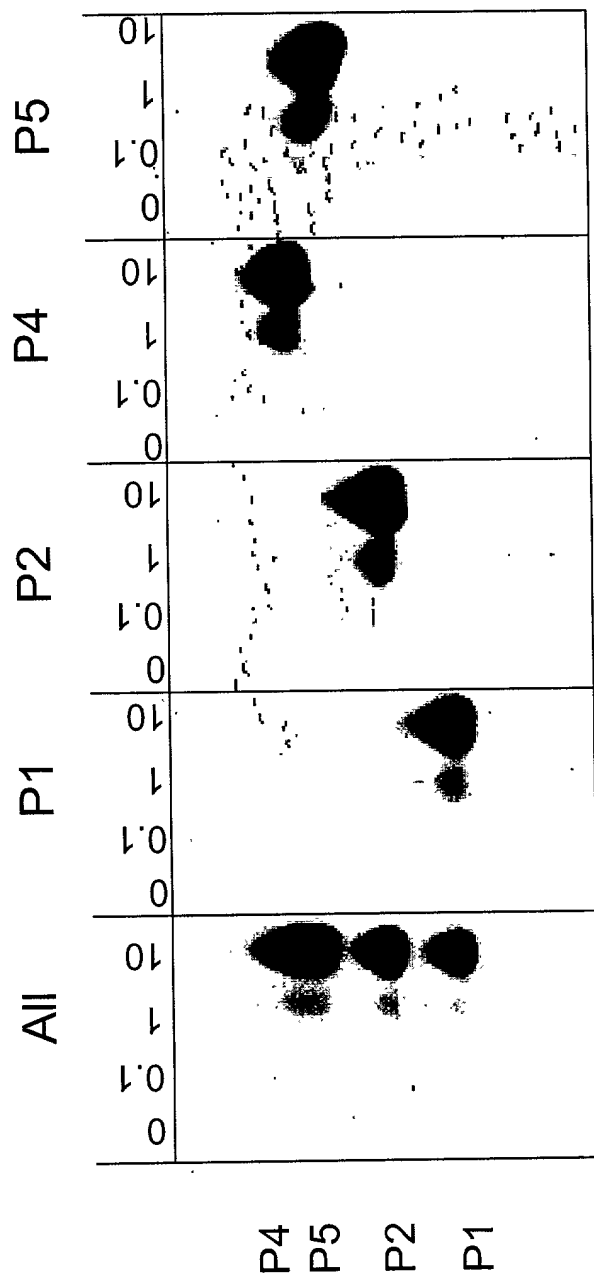
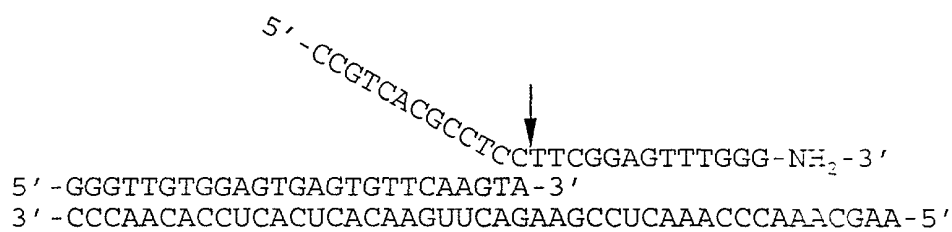


FIGURE 27

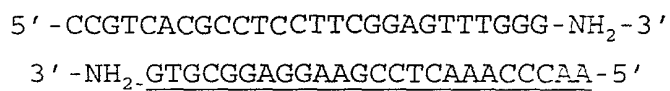


# FIGURE 28A

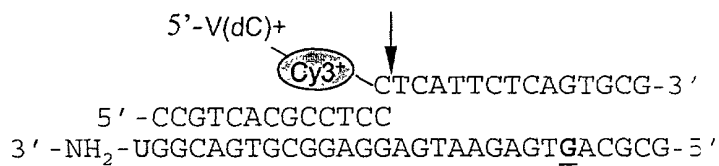
## Primary reaction



## Human MCP-1 mRNA

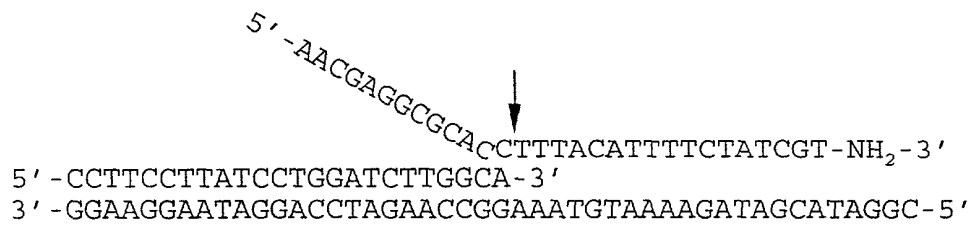


## Secondary reaction

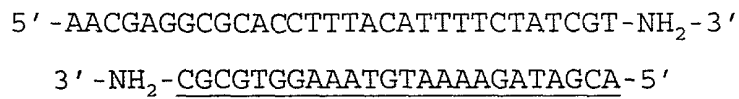


## FIGURE 28B

Primary reaction



Human Ubiquitin mRNA



Secondary reaction

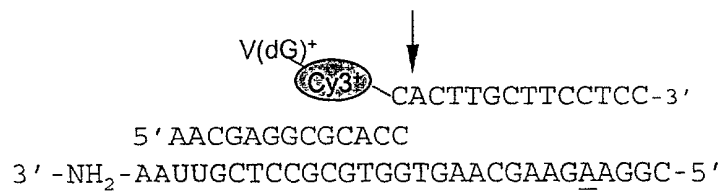
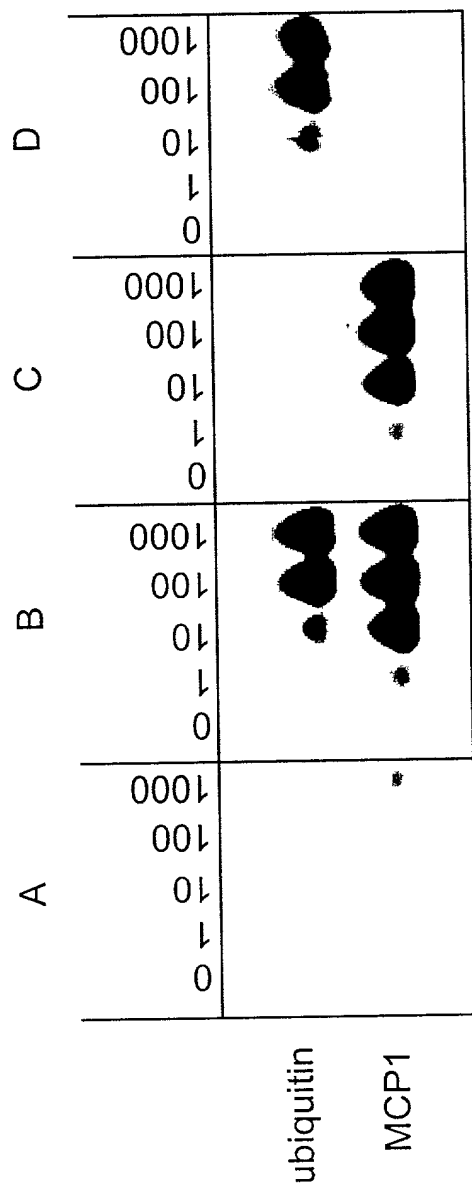
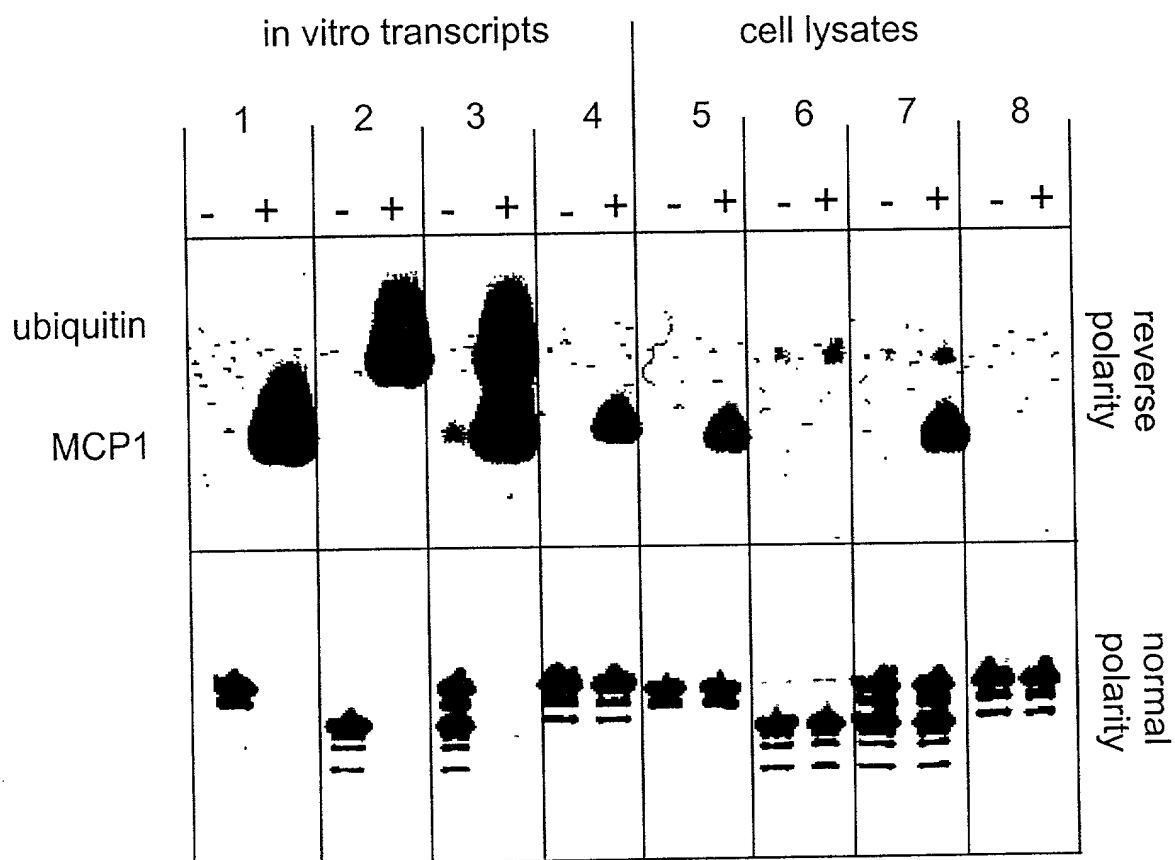




FIGURE 29



# FIGURE 30A



# FIGURE 30B

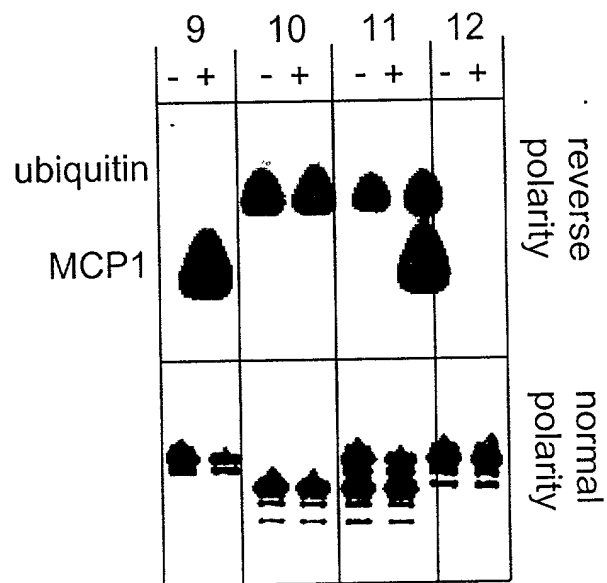
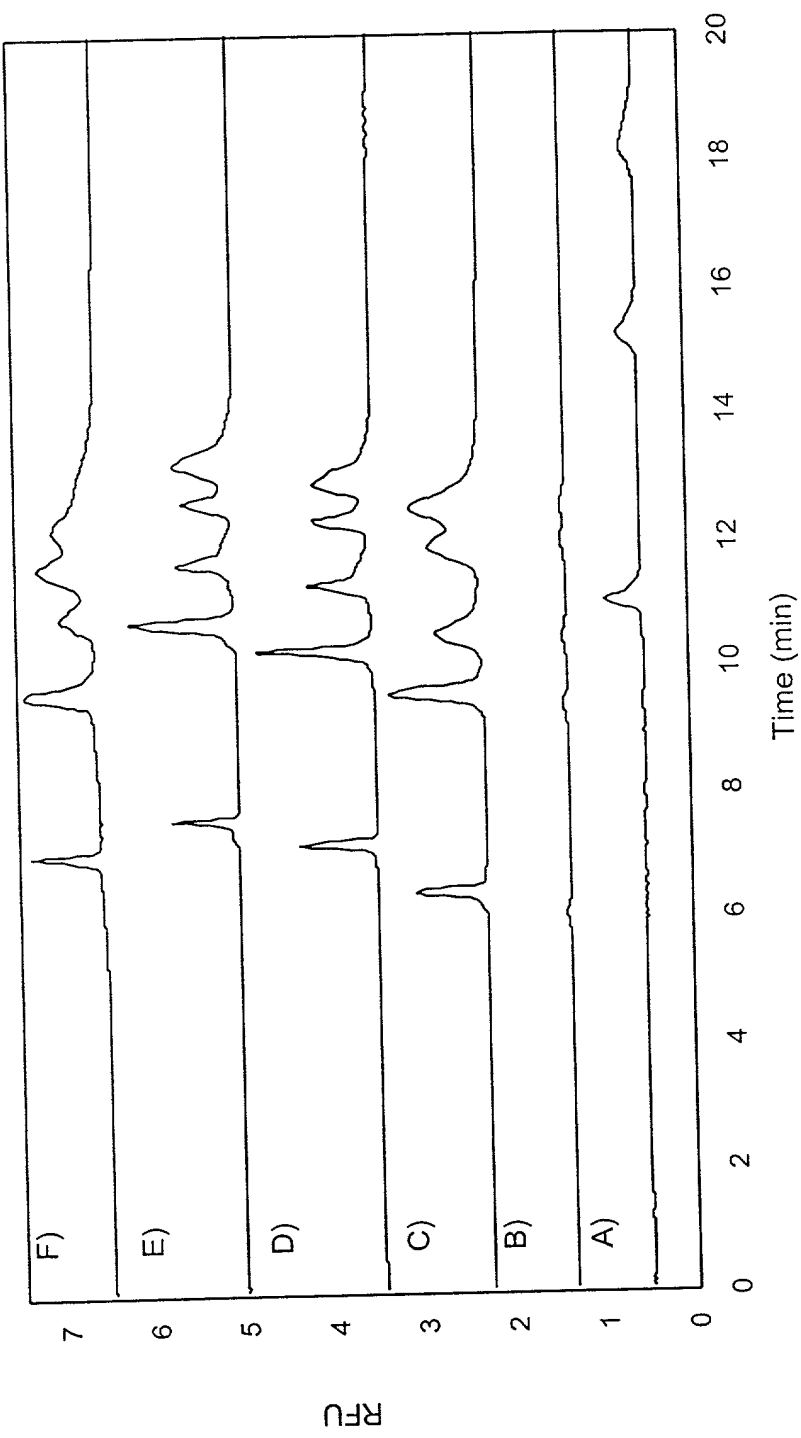


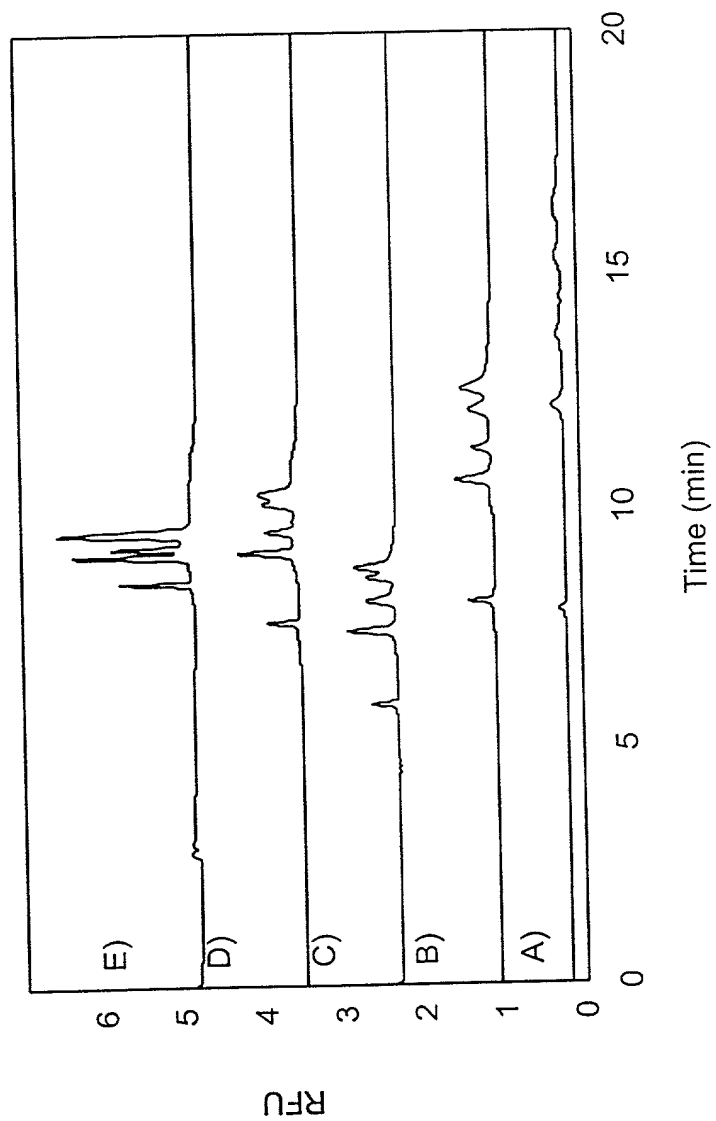
FIGURE 31



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9h/εε

FIGURE 32



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FIGURE 33

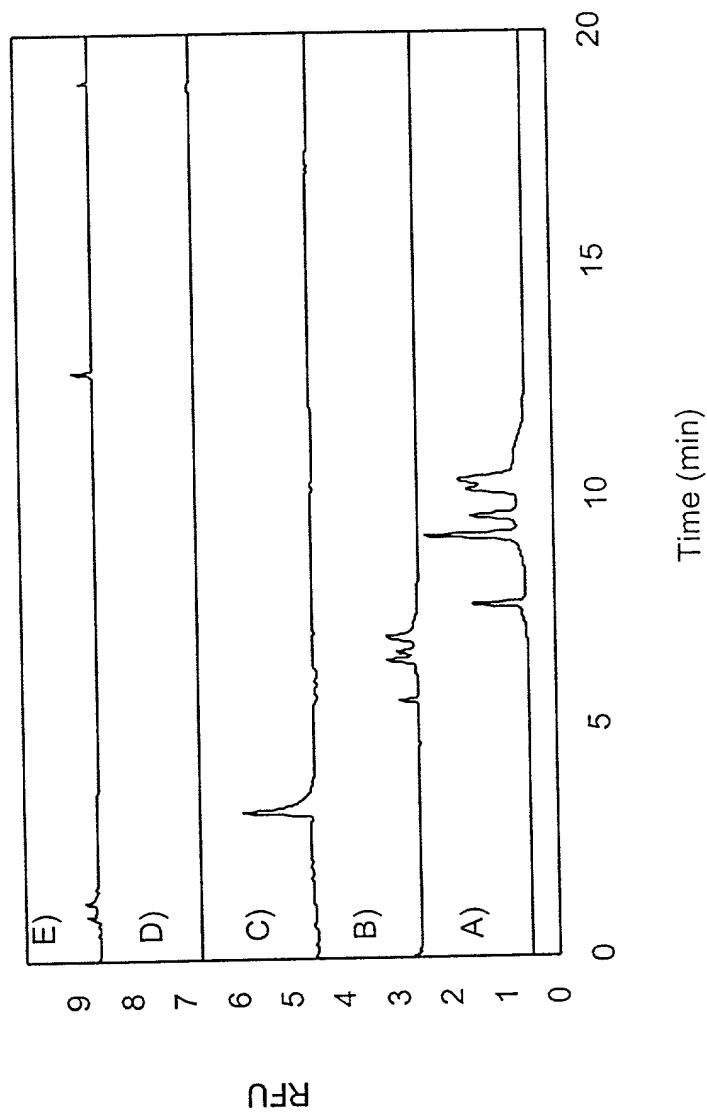
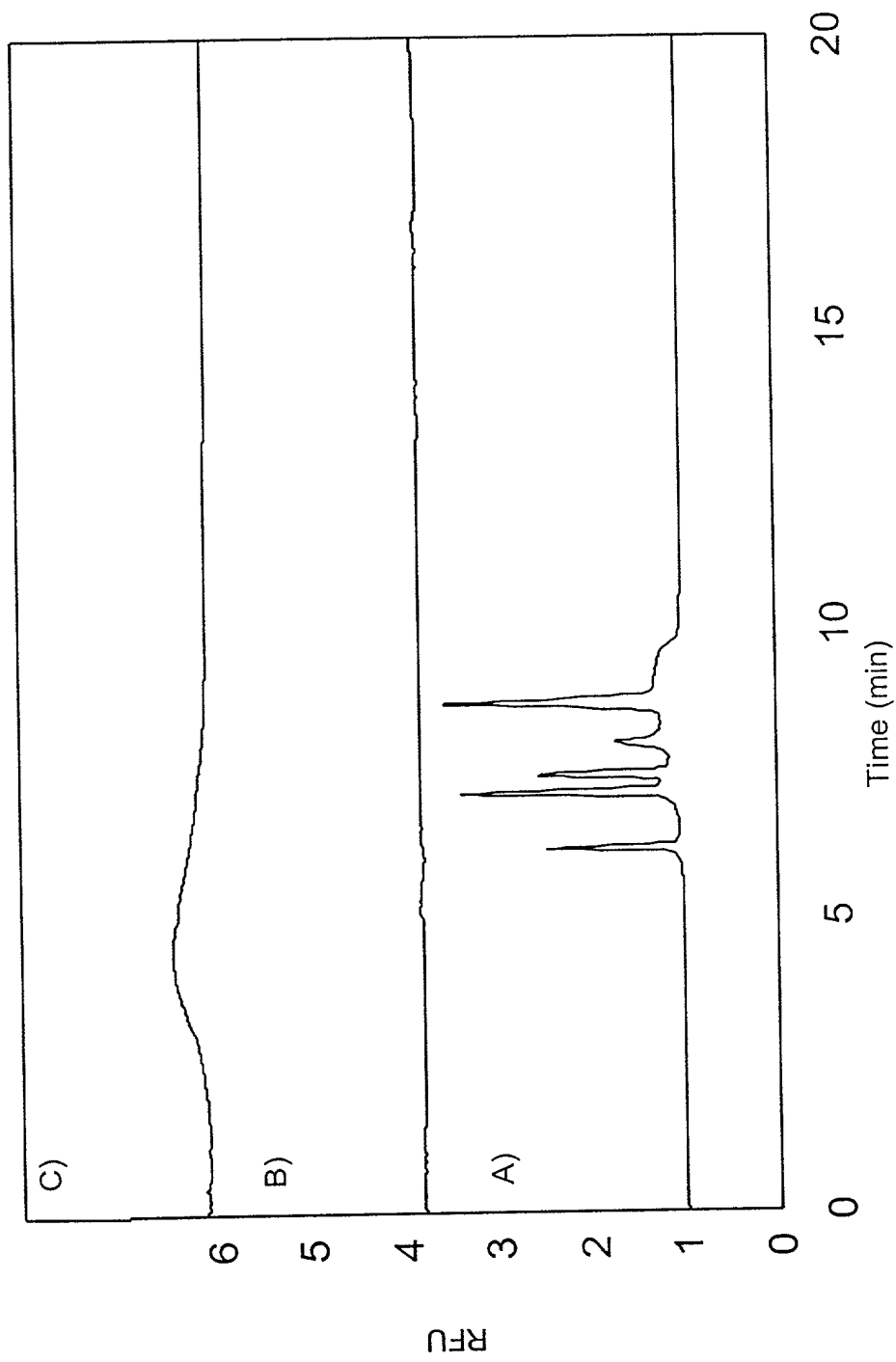
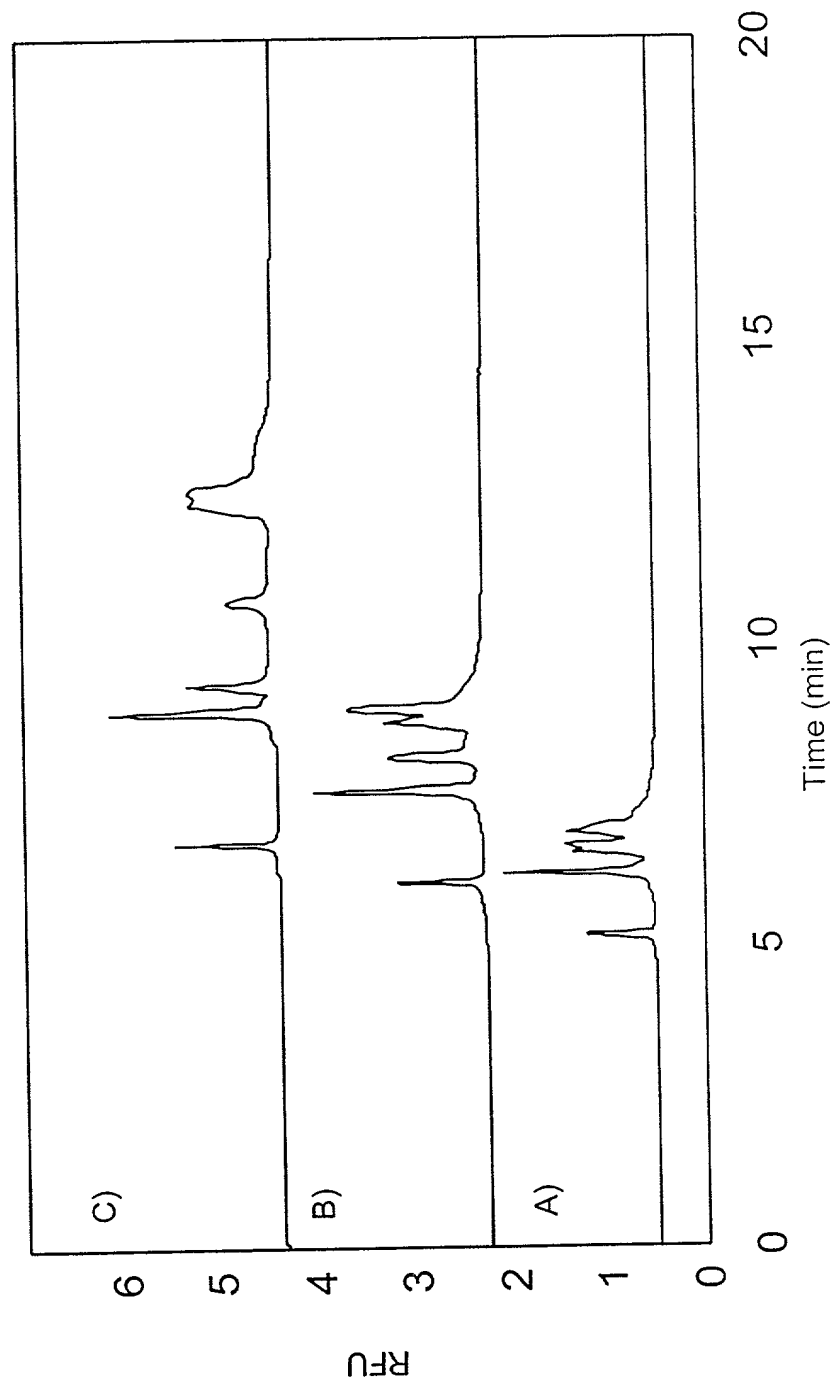


FIGURE 34



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FIGURE 35





9h/1b

FIGURE 36

